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July 29, 1985

Mr. Rodney Gaither
Hazardous Waste Enforcement Branch
U.S. EPA Region 5
230 S. Dearborn Street
Chicago, Illinois 60604

Dear Mr. Gaither:

PRC Environmental Management, Inc. (PRC) has reviewed the July 1985 Final Remedial Investigation Report (RI) prepared by Kumar Malhotra & Associates, Inc. (KMA) for the Johns-Manville Disposal Area in Waukegan, Illinois. PRC's comments on the Final RI cover only those sections of the report that relate to potential air emissions from the disposal area. This includes Sections 1 and 5, parts of Sections 3 and 4, Appended Material to Volume I (including Response to Comments on ORF Report 10335 by EPA in their Letter of June 4, 1985 by Dr. E.J. Chatfield, Ontario Research Foundation, 25th June 1985), and Appendices I and K of Volume II. This review focuses on how the Final RI addresses PRC's conclusions and recommendations concerning the March 1985 Draft RI which were submitted to EPA in a previous letter report (April 17, 1985) delivered under this work assignment. The points brought out in the conclusions and recommendations can be summarized as follows:

- Failure of the Draft RI to consider asbestos in the Endangerment Assessment;
- Absence of on-site measurements of lead concentrations in air; and
- Failure of the Draft RI to address several factors likely to have an impact on fugitive air emissions from the disposal area.

The remainder of this letter report discusses how the Final RI has addressed these points.

The Final RI addresses the issue of potential asbestos exposure for the population surrounding the Johns-Manville site and incorporates information on asbestos into the Section 5 Endangerment Assessment. However, PRC questions the presentation of the asbestos material in Section 5 of the Final RI. The majority of fibers detected in the October-November 1984 air monitoring study conducted by Ontario Research Foundation were chrysotile fibers shorter than 5 micrometers. The Endangerment Assessment of the Final RI

appears to minimize the importance of this finding by suggesting that amphibole fibers longer than 5 micrometers pose a much greater hazard to human health:

> "Fibers that are shorter than 8.0 micrometers regardless of diameter ... possess little or no capacity to be fibrogenic or carcinogenic." (Page 5-5)

> "There is rather strong evidence suggesting that in the circumstances of human exposure, crocidolite and amosite (both amphiboles) have a greater proclivity for causing an adverse biological response than does chrysotile." (Pages 5-10 to 5-11)

Without choosing sides in the scientific debate surrounding asbestos toxicity, PRC questions this presentation for two reasons. First, there is no consensus on the effects of either fiber type or fiber length on asbestos toxicity. A 1984 National Research Council report on Nonoccupational Exposure to Asbestiform Fibers (cited in Zurer, P.S., Chemical & Engineering News 63(9):28, March 4, 1985) concluded that there was no minimum fiber size that could be declared not to have an effect on health. The Occupational Safety and Health Administration believes that "all asbestos fiber types appear to have an equivalent potency for causing lung cancer" (49 Federal Register 14116, April 10, 1984). Second, none of the asbestos studies cited in the Endangerment Assessment are supported by references.

The proposed air sampling program for lead (Appendix K of the Final RI) appears to be adequate for evaluating potential human health and environmental risks. On-site sampling locations have been chosen to evaluate air lead levels near disposal areas at the interior of the site and along the north, south, and east boundaries of the site. Two off-site background locations will also be sampled. The proposed study methods appear to conform to EPA-recommended procedures for measuring lead in suspended particulate matter collected from ambient air.

Some of the factors which could potentially affect fugitive air emissions at the Johns-Manville site which were ignored in the Draft RI have been addressed to a limited extent in the Final RI. Current disposal practices and dust suppression measures are described briefly on pages 3-15 and 3-17. A short description of the waste piles near on-site asbestos sampling locations 1 and 5 is provided on page 4-2. However, the Final RI fails to address the potential effects of climate, specifically the impact of prolonged drought and high winds on air concentrations of asbestos. The June 14, 1984 Consent Order between Johns-Manville and U.S. EPA Region V required that the RI "be conducted in conformance ... with the applicable provisions of 40 C.F.R. 300.68." This section of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) lists climate, including rainfall, as one of the factors to be considered in the RI. PRC agrees that the asbestos air monitoring program was carried out under the guidelines specified in Exhibit 1, Section 4 to the Consent Order: sampling on "days with rain or days following precipitation by less than 24 hours should be avoided." In interpreting these study results, however, the RI should consider the broader guidelines set forth in the NCP. The October-November 1984 air asbestos study was conducted under conditions that "ranged from wet to relatively dry." The results cannot be considered representative of air concentrations during dry summer months when the population around the site

is more likely to be outdoors and, as a result, more likely to be exposed to airborne asbestos from the site.

Please feel free to contact me if you have any questions on the comments presented above. PRC and INTERA will comment on the results of the air lead concentration and ground water inorganic anion studies at your request. Ron Lantz at INTERA and I will await further directions from you before proceeding on this work assignment.

Sincerely,

PRC Environmental Management, Inc.

John Dirgo

John Dirgo
Environmental Scientist

JD/md

cc: Nancy Deck (2 copies)
Marian Bernd